

REMARKS

Upon entry of the amendment, claims 1-3, 5-7, 9-11 and 13-36 are all the claims pending in the application.

Claims 1-3, 5-7 and 9-11 are amended.

Claims 31-36 are added. Support for the newly added claims is found, for example, on page 7, lines 9-24 of the specification. No new matter has been added.

Independent claims 1, 5 and 9 are amended to clarify that the olefin concentration is controlled in the combined feed and recycle stream prior to entering the reactor. Support is found at page 7, lines 14-16 of the specification. No new matter is added.

Claims 1-3, 5-7, 9-11 and 13-30 are rejected under 35 U.S.C. § 102(b) as being anticipated by Atkins. Claims 1-3, 5-7, 9-11 and 13-30 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Atkins in view of Froom.

Applicants respectfully traverse as follows.

Applicants clarified in the previous response that it is generally known to those skilled in the art that butenes are produced in the synthesis of an ester from ethylene and acetic acid in the vapor phase. As evidenced by the data in Example 1 of the present application, and further evidenced by Froom, butenes are produced in the process for the production of ethyl acetate from ethylene and acetic acid in the presence of a heteropolyacid catalyst.

In WO 02/12162, ("Froom") it is recognized that butenes are produced in the process for the production of ethyl acetate from ethylene and acetic acid in the presence of a heteropolyacid catalyst at page 9, lines 19--27, as follows:

“The apparatus comprises a distillation column 10, which is fed with an ethyl acetate product stream via line 12. This ethyl acetate product stream is produced by the reaction between ethylene and acetic acid in the presence of a heteropolyacid catalyst. The apparatus further comprises a hydrogenator 14, a knock-out pot or separation column 16, a settling unit (e.g., a decanter) 18 and a second distillation column 20. In operation, a product stream comprising ethyl acetate, water, ethanol, methyl ethyl ketone, acetaldehyde and volatile components such as hydrogen, diethyl ether, butanes, butenes, methyl pentanes and methyl pentenes is introduced to the distillation column 10 via line 12.”

Atkins and Froom use the same process with respect to the ester synthesis at issue. Accordingly, it is understood by those of skill in the art that the process of Atkins results in the production of butenes.

It is important for the viability and activity of the catalyst to regulate the concentration of butenes. This cannot be evaluated from the reaction for several hours during the initial stage of the reaction. Therefore, it is important that the concentrations of the substances condensed in the gas recycling system are regularly controlled.

To emphasize the difference between the cited art, Applicants amend claims 1-3, 5-7, 9-11, and 13-36 to clarify that the olefin concentration is controlled in the combined feed and recycle stream prior to entering the reactor.

The present claims are completely different from the processes of Atkins and Froom in the point that butenes are positively removed from the recycling process. This is described in detail in the present specification, page 7, lines 9-24. Neither Atkins nor Froom discloses or

AMENDMENT UNDER 37 C.F.R. § 1.114(c)
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suggests this step. Therefore, it is respectfully requested that the rejections be reconsidered and withdrawn.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



Keith B. Scala
Registration No. 43,088

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE

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